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EXAMINER

FISH, JAMIESON W

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/808,373

Applicant(s)

STAAL ET AL.

Examiner

Jamieson W. Fish

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 1, 2, 6, 7, 11, 16, 21, 29, 34, and 39 are objected to because of the following informalities: "terrestrial" should be replaced with "terrestrial." Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1-46 are rejected under 35 U.S.C. 102(e) as being anticipated by Williams (US 5,970,386).

3. Regarding claim 1, Williams teaches in combination for providing for the introduction of satellite television into apartments in an apartment building having a cable plant wired to distribute terrestrial television from a cable head end system (See Fig. 1 Col. 5 lines 5-67, Col. 6 lines 1-15), means at the apartment building for receiving signals providing the satellite television and having a first particular framing (See Fig. 1 Main signal receiver 14 and Col. 5 lines 19-37), means at the apartment building for reframing the satellite television signals in the first particular framing to a second particular framing corresponding to that provided for terrestrial television (See Fig. 1

Transmodulator 20 Col. 5 lines 40-67, Col. 6 lines 1-31), means at the apartment building for distributing the signals in the second particular framing through the cable plant (See Fig. 3 Upconverter 62 Col. 8 lines 50-67), and means at the apartments in the apartment building for operating upon the signals in the second particular framing, after the passage of such signals through the cable plant, to deframe the television signals prior to conversion to a television image (See Fig. 7 Col. 13 lines 63-67, Col. 14 lines 1-16, Col. 15 lines 1-48).

4. Regarding claim 2, Williams teaches wherein the signals are modulated directly from the second particular framing for the terrestrial television before the signals are passed through the cable plant (See Col. 6 lines 16-31) and wherein the signals modulated for terrestrial television are demodulated after passage through the cable plant (See Col. 13 lines 63-67, Col. 14 lines 2-23).

5. Regarding claim 3, Williams teaches wherein means are provided at the apartments in the apartment building for operating upon the signals in the second particular framing, after the deframing of such signals, to provide for the reproduction of the television image represented by such signals (See Col. 15 lines 8-56).

6. Regarding claim 4, Williams teaches wherein the signals received at the apartment building are in the form of packets defined by a first particular number of signal bytes in each packet (See Col. 8 lines 15-31) and wherein the reframing means reframe the packets from the first particular framing to the second particular framing defined by a second particular number of signal bytes in each such packet and wherein means are provided at the apartment building for adding a side byte at a particular

position in each packet in the first particular framing to provide information to the apartment house for processing the information in such packet (See Col. 8 lines 15-31, Col. 11 lines 32-40).

7. Regarding claim 5, Williams teaches wherein means are provided at the apartments in the apartment building for operating upon the signals in the second particular framing, after the deframing of such signals, to provide for the reproduction of the television image (See Fig. 7 Col. 13 lines 63-67, Col. 14 lines 1-16, Col. 15 lines 1-48) and wherein the signals received at the apartment building are in the form of packets defined by a first particular number of signal bytes in each packet and wherein the reframing means reframe the packets from the first particular framing to the second particular framing defined by a second particular number of signal bytes in each such packet and wherein means are provided at the apartment building for adding a side byte at a particular position in each packet in the first particular framing to provide information to the apartment house for processing the information in such packet (See Col. 11 lines 32-63).

8. Regarding claim 6, Williams teaches in combination for providing for the introduction of satellite television from satellite transponders into television receivers in apartments in an apartment building having a cable plant wired to distribute terrestrial television from a cable head end system (See Fig. 1 Col. 5 lines 5-67, Col. 6 lines 1-15), means at the apartment building for receiving packets of signal bytes from the satellite transponders, each packet being defined by a first frame having a first particular number of signal bytes (See Fig. 1 Main signal receiver 14 and Col. 5 lines 19-37, Col. 8 lines

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15-31), means at the apartment building for reframing the packets of signal bytes in the first frames to packets each defined by a second particular number of signal bytes in a second frame different from the first frame and corresponding to that provider from the terrestrial transponders (See Col. 11 lines 32-63) means at the apartment building for distributing the signal bytes in the second frames through the cable plant, and means at the apartment in the apartment building for deframing the packets of signal bytes in the second frames after the passage of the signal bytes in the second frames through the cable plant (See Fig. 3, Fig. 7 Upconverter 62 Col. 8 lines 50-67, Col. 13 lines 63-67, Col. 14 lines 1-16, Col. 15 lines 1-48).

9. Regarding claim 7, Williams teaches wherein the signal bytes in the packets in the second frames are modulated before such signal bytes are distributed through the cable plant (See Col. 12 lines 4-67) and wherein the signal bytes modulated in the packets in the second frames for terrestrial navigation are demodulated after such modulated signal bytes are distributed through the cable plant (See Col. 13 lines 63-67, Col. 14 lines 1-23).

10. Regarding claim 8, Williams teaches wherein at least one additional signal byte is provided at the apartment building with each of the packets of the signal bytes in the first frames to indicate the existence or lack of existence of a forward uncorrectable error in the packet (See Col. 11 lines 22-40) and wherein means are provided for reformatting the at least one additional signal byte at the apartment building in the first frames in accordance with the reframing of the packets from the first frames to the second frames (See Fig. 3 Col. 11 lines 9-67, Col. 12 lines 1-45) and wherein means

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are provided for processing the at least one additional signal byte, after the reframing of each packet in the second frame, to provide for the operation of the television receivers in the apartments in the apartment building in finding and reproducing the television image represented by the signal bytes from the satellite transponders, including error concealment if necessary (See Fig. 3 Col. 11 lines 9-67, Col. 12 lines 1-45, Col. 15 lines 7-56)

11. Regarding claim **9**, Williams teaches wherein at least one additional signal byte is provided at the apartment building with each of the packets of the signal bytes in the first frames to indicate particular information individual to such packets (See Col. 11 lines 22-40) and wherein means are provided at the apartment building for reforming the at least one additional signal byte at the apartment building in accordance with the reframing of the packets from the first frames to the second frames (See Fig. 3 Col. 11 lines 9-67, Col. 12 lines 1-45) and wherein means are provided at the apartment building for processing the particular information in the at least one additional byte after the reframing of the packets from the first frames to the second frames (See Fig. 3 Col. 11 lines 9-67, Col. 12 lines 1-45).

12. Regarding claim **10**, Williams teaches wherein at least one additional signal byte is provided at the apartment building with each of the packets of the signal bytes in the first frames to indicate particular information individual to such packets (See Fig. 5 R-S Error Flag Col. 11 lines 9-67, Col. 12 lines 1-45) and wherein means are provided at the apartment building for reforming the at least one additional signal byte at the apartment building in accordance with the reframing of the packets from the first frames to the

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second frames (See Col. 11 lines 9-67, Col. 12 lines 1-45) and wherein means are provided at the apartment building for continued processing of the particular information in the at least one additional byte after the reframing of the packets from the first frames to the second frames (See Fig. 3 Col. 11 lines 9-67, Col. 12 lines 1-45, Col. 15 lines 7-56).

13. Regarding claim **11**, Williams teaches in combination for providing for the introduction of satellite television from satellite transponders into apartments in an apartment building having a cable plant wired to distribute terrestrial television from a cable head end system (See Fig. 1 Col. 5 lines 5-67, Col. 6 lines 1-15), means at the apartment building for receiving a plurality of first packets each defined by a first sync byte and by a first number of signal bytes individual to satellite television (See Fig. 1 Main signal receiver 14 and Col. 5 lines 19-37, Col. 11 lines 9-21), means at the apartment building for providing second sync bytes at positions in the first packets to define second packets each having a second number of signal bytes for terrestrial television, the second number being different from the first number (See Fig. 5 Col. 11 lines 9-63), means at the apartment building for providing continued processing of the second packets of signal bytes in accordance with the positioning of the second sync bytes (See Col. 13 lines 63-67, Col. 14 lines 1-36).
14. Regarding claim **12**, Williams teaches means at the apartment building for adding to each of the first packets a side byte at a particular position relative to the first sync byte for such packet to provide additional information to aid in the detection and processing of the signal bytes in the packets (See Fig. 5 Col. 11 lines 9-63), and means

at the apartment in the apartment building for processing the signal bytes in the second packets in accordance with the additional information supplied in the side bytes for the detection and processing of the signal bytes in the packets, including error concealment if necessary (See Fig. 3 Col. 11 lines 9-67, Col. 12 lines 1-45, Col. 15 lines 7-56).

15. Regarding claim **13**, Williams teaches the receiving means at the apartment building also receiving for each of the first packets a first plurality of bytes including a forward error correction for each of the first packets (See Col. 11 lines 9-63), means at the apartment building for reframing the first plurality of bytes into a second plurality of bytes and adding the forward error correction for the second packets (See Col. 12 lines 4-23).

16. Regarding claim **14**, Williams teaches means at the apartment building for modulating the signal bytes in each of the second packets after the second sync bytes and a new forward error correction have been added (See Col. 12 lines 4-45), a cable plant at the apartment building for distributing the modulated signal bytes in each of the second packets (See Fig. 1 MDU Cable Plant 26 Col. 5 lines 40-59), and means at the apartments in the apartment building for demodulating the modulated signal bytes in the second packets after the passage of the modulated signal bytes in the second packets through the cable plant (See Fig. 7 Col. 13 lines 38-67, Col. 14 lines 1-23).

17. Regarding claim **15**, Williams teaches the receiving means at the apartment building also receiving a first plurality of bytes as well as a forward error correction for each of the first packets (See Col. 11 lines 9-63), means at the apartment building for converting the first plurality of bytes into a second plurality of bytes and adding the

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forward error correction for the second packets (See Col. 11 lines 9-67, Col. 12 lines 1-34), means at the apartment building for modulating the signal bytes in each of the second packets after the second sync bytes have been added (See Col. 11 lines 9-67, Col. 12 lines 1-34), a cable plant at the apartment building for distributing the signal bytes in each of the second packets (See Fig. 1 MDU Cable Plant 26 Col. 5 lines 40-59), and means at the apartments in the apartment building for demodulating the modulated signal bytes in the second packets after the distribution of the modulated signal bytes in the second packets through the cable plant (See Fig. 7 Col. 13 lines 38-67, Col. 14 lines 1-23).

18. Regarding claim **16**, Williams teaches in combination for providing for the introduction of satellite television from satellite transponders into apartments in an apartment building having a cable plant wired to distribute terrestrial television from a cable head end system (See Fig. 1 Col. 5 lines 5-67, Col. 6 lines 1-15), means at the apartment building for receiving MPEG2_{QPSK} signals from the satellite transponders (See Fig. 1 Main signal receiver 14 and Col. 5 lines 19-37, Col. 15 lines 32-48), means at the apartment building for reframing the MPEG2_{QPSK} signals into MPEG2_{QAM} signals representing terrestrial television from the terrestrial transponders (See Fig. 1 Transmodulator 20 Col. 5 lines 40-67, Col. 6 lines 1-31), means at the apartment building for providing side signals providing information to aid in processing to be provided in the apartments in the apartment building on the QAM signals (See Col. 11 lines 9-63), and means at the apartments in the apartment building for processing the

QAM signals in accordance with the information provided by the side signals(See Col. 13 lines 63-67, Col. 14 lines 1-36).

19. Regarding claim **17**, Williams teaches wherein the receiving means receives signals including forward error correction bytes in the MPEG2_{QPSK} signals (See Col. 11 lines 9-63), and wherein means are provided at the apartment buildings, to perform forward error corrections in the MPEG2_{QPSK} signals, for creating an uncorrectable error flag and for creating new forward error correction bytes for the MPEG2_{QAM} signals (See Col. 11 lines 9-67, Col. 12 lines 1-33) and wherein means are provided at the apartment building for performing forward error corrections at the apartments in the apartment building using the forward error correction bytes in the MPEG2_{QAM} signals (See Col. 13 lines 63-67 Col. 14 lines 1-57).

20. Regarding claim **18**, Williams teaches means at the apartment building for providing side signals having indications aiding in the detection and processing of the MPEG2_{QAM} signals received at the apartment buildings (See Col. 11 lines 9-63) and means at the apartment building for detecting and reproducing the MPEG2_{QAM} signals in accordance with the indications in the side signals (See Col. 13 lines 63-67, Col. 14 lines 1-58).

21. Regarding claim **19**, Williams teaches the MPEG2_{QPSK} signals being provided in packets of first signal lengths, the MPEG2_{QPSK} signals also including sync signals indicating the beginning of the packets of the first signal lengths (See Col. 11 lines 1-63), the MPEG2_{QAM} signals being provided in packets of second signal lengths different from the first signal lengths (See Col. 11 lines 1-63), means responsive at the apartment

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building for including, in each packet of the MPEG2_{QAM} signals, signals indicating the beginning of each MPEG2_{QPSK} packet (See Fig. 5, Col. 11 lines 1-63), means responsive to the sync signals for the MPEG2_{QPSK} packets, and to the relative lengths of the MPEG2_{QPSK} and MPEG2_{QAM} packets, for producing separate sync signals at the beginning of each of the MPEG2_{QAM} packets (See Fig. 5, Col. 11 lines 1-63).

22. Regarding claim **20**, Williams teaches wherein the receiving means receives signals including forward error correction bytes in the MPEG2_{QPSK} signals (See Col. 11 lines 1-63) and wherein means are provided at the apartment buildings, to perform forward error corrections in the MPEG2_{QPSK} signals, for creating an uncorrectable error flag and for creating new forward error correction bytes in the MPEG2_{QAM} signals (See Col. 11 lines 1-67, Col. 12 lines 1-45) and wherein means are provided at the apartment building for performing forward error corrections at the apartments in the apartment building using forward error correction bytes in the MPEG2_{QAM} signals (See Col. 13 lines 63-67, Col. 14 lines 1-23) and wherein means are provided at the apartment building for providing side signals having indications aiding in the detection and processing of the MPEG2_{QAM} signals received at the apartment buildings (See Col. 11 lines 1-67, Col. 12 lines 1-45) and wherein means are provided at the apartment building for detecting and reproducing the MPEG2_{QAM} signals in accordance with the indications in the side signals (See Col. 13 lines 63-67, Col. 14 lines 1-23).

23. Regarding claim **21**, Williams teaches In combination for providing for the introduction of satellite television into apartments in an apartment building having a cable plant wired to distribute terrestrial television signals (See Fig. 1 Col. 5 lines 5-67,

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Col. 6 lines 1-15), means at the apartment building for receiving MPEG2_{QPSK} packets of signal bytes, each MPEG2_{QPSK} packet including a first particular number of signal bytes and including a first sync byte at the beginning of each MPEG2_{QPSK} packet (See Fig. 1 Main signal receiver 14 and Col. 5 lines 19-37, Col. 11 lines 9-63), means at the apartment building for reframing the MPEG2_{QPSK} packets of signal bytes into MPEG2_{QAM} packets of signal bytes, each such QAM packet including a second particular number of signal bytes where the second particular number is different from the first particular number (See Fig. 1 Transmodulator 20 Col. 5 lines 40-67, Col. 6 lines 1-31, Col. 8 lines 26-31), and means at the apartment building for providing a second sync byte at the beginning of each MPEG2_{QAM} packet of signal bytes (See Fig. 5, Col. 11 lines 9-63).

24. Regarding claim **22**, Williams teaches means at the apartment building for providing a plurality of superpackets each including a particular number of the MPEG2_{QPSK} packets of signal bytes and the first sync bytes for the MPEG2_{QPSK} packets of signal bytes in such superpacket and the second sync signals for the MPEG2_{QAM} packets of the signal bytes in such superpacket (See Fig. 5 Col. 11 lines 9-63).

25. Regarding claim **23**, Williams teaches means at the apartment building for providing a side byte for each of the MPEG2_{QPSK} packets of signal bytes, the side bytes aiding in detection and processing of the MPEG2_{QAM} signals (See Fig. 5 Col. 11 lines 9-63), means at the apartment building for separating the side bytes from the MPEG2_{QAM} packets of the signal bytes (See Col. 13 lines 63-67, Col. 14 lines 1-23), and means responsive at the apartment building to the side bytes for processing the MPEG2_{QAM}

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packets of signal bytes in accordance with the indications in the side bytes (See Col. 13 lines 63-67, Col. 14 lines 1-23).

26. Regarding claim **24**, Williams teaches means at the apartment building for providing a side byte at a particular position in each of the MPEG2_{QPSK} packets before the reframing of the MPEG2_{QPSK} packets into MPEG2_{QAM} packets (See Fig. 5 Col. 11 lines 9-63), the MPEG2_{QPSK} packets of signal bytes providing information for the production of television images (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48), each side byte providing information relating to the detection and processing of the signal bytes in the MPEG2_{QAM} packets to obtain television images (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48), and means at the apartment building for processing the information in the side bytes in the MPEG2_{QAM} packets, after the reframing of the MPEG2_{QPSK} packets into the MPEG2_{QAM} packets, to facilitate the distribution of the television images (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48).

27. Regarding claim **25**, Williams teaches the receiving means being operative to receive signal bytes including forward error correction bytes in the MPEG2_{QPSK} packets (See Col. 11 lines 9-63), means for performing forward error correction in the MPEG2_{QPSK} packets, before the reframing of the signal bytes in the MPEG2_{QPSK} packets into the MPEG2_{QAM} packets of signal bytes (See Col. 11 lines 9-63), and means for adding signal bytes representing new forward error correction in the MPEG2_{QAM} packets in a form compatible with the signal bytes in the MPEG2_{QAM} packets, such

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means being operative after the reframing of the MPEG2_{QPSK} packets of signal bytes into the MPEG2_{QAM} packets of signal bytes (See Col. 11 lines 9-63).

28. Regarding claim **26**, Williams teaches the apartment building having a cable plant constructed to distribute the MPEG2_{QAM} packets of signal bytes (See Fig. 1 Cable Plant 26, Col. 6 lines 16-31), means at the apartment building for modulating the MPEG2_{QAM} packets of signal bytes before the distribution of such packets through the cable plant (See Col. 12 lines 4-67, Col. 13 lines 1-38), means for distributing the MPEG2_{QAM} packets of the modulated signals through the cable plant (See Fig. 3 Col. 9 lines 21-32), and means for demodulating the MPEG2_{QAM} packets of the modulated signal bytes after the passage of such modulated signal bytes through the cable plant (See Col. 13 lines 63-67, Col. 14 lines 1-23).

29. Regarding claim **27**, Williams teaches the signal bytes in the MPEG2_{QPSK} packets received by the receiving means being compressed (See Col. 11 lines 41-63 MPEG packets are compressed), means for decompressing the MPEG2_{QPSK} signal bytes in the MPEG2_{QAM} packets after such signal bytes have been demodulated (See Col. 15 lines 7-56), and means for operating upon the decompressed MPEG2_{QPSK} signal bytes in the MPEG2_{QAM} packets to recover the television images (See Col. 15 lines 7-56).

30. Regarding claim **28**, Williams teaches means at the apartment building for providing a side byte at a particular position in each of the MPEG2_{QPSK} packets before the reframing of the MPEG2_{QPSK} packets of signal bytes into the MPEG2_{QAM} packets of signal bytes (See Fig. 5 Col. 11 lines 9-63), the signals bytes in the MPEG2_{QPSK} packets providing information for the production of television images each side byte in

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the MPEG2_{QAM} packets providing information relating to the detection and processing of the signal bytes in the MPEG2_{QAM} packets to obtain television images (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48), means at the apartment building for processing the information in the side bytes in the MPEG2_{QAM} packets, after the reframing of the MPEG2_{QPSK} packets into the MPEG2_{QAM} packets, to facilitate the distribution of the television images (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48), the receiving means being operative to receive the MPEG2_{QPSK} packets of signals bytes including forward error correction, means for performing forward error correction in the MPEG2_{QPSK} packets before the reframing of the MPEG2_{QPSK} packets of signal bytes into the MPEG2_{QAM} packets of signal bytes (See Col. 11 lines 9-63), and means for adding signal bytes representing new forward error correction in a form compatible with the signal bytes in the MPEG2_{QAM} packets, such means being operative after the reframing of the MPEG2_{QPSK} packets of signal bytes into the MPEG2_{QAM} packets of signal bytes, the apartment building having a cable plant constructed to distribute the MPEG2_{QAM} packets of signal bytes (See Col. 11 lines 9-67, Col. 12 lines 1-67), means at the apartment building for modulating the MPEG2_{QAM} packets of signal bytes before the distribution of such packets through the cable plant (See Col. 11 lines 9-67, Col. 12 lines 1-67), means for distributing the MPEG2_{QAM} packets of modulated signal bytes through the cable plant (See Col. 11 lines 9-67, Col. 12 lines 1-67), means for demodulating the MPEG2_{QAM} packets of modulated signal bytes after the distribution of such MPEG2_{QAM} packets through the cable plant (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48), the signal bytes in the MPEG2_{QPSK} packets received by

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the receiving means being compressed, means for decompressing the MPEG2_{QPSK} signal bytes in the MPEG2_{QAM} packets after such signal bytes have been demodulated (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48), and means for operating upon the decompressed MPEG2_{QPSK} signal bytes in the MPEG2_{QAM} packets to recover the television images (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48).

31. Regarding claim **29**, Williams teaches In combination for providing for the introduction of satellite television from satellite transponders into apartments in an apartment building having a cable plant wired to distribute terrestrial television from a cable head end system (See Fig. 1 Col. 5 lines 5-67, Col. 6 lines 1-15), means at the apartment building for receiving MPEG2_{QPSK} packets of signal bytes, each packet including a first particular number of signal bytes and including a first sync byte at the beginning of the signal bytes forming each MPEG2_{QPSK} superpacket (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45), a second particular number of the MPEG2_{QPSK} packets defining a superpacket (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45), means at the apartment building for reframing the MPEG2_{QPSK} packets of signal bytes in each superpacket into MPEG2_{QAM} packets of signal bytes in such superpacket, each such MPEG2_{QAM} packet including a third particular number of signal bytes where the third particular number is different from the first particular number (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45), means at the apartment building for providing a second sync byte at the beginning of each MPEG2_{QAM} packet of signal bytes in each superpacket (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45), means responsive at the apartments

in the apartment building to the sync byte in the MPEG2_{QAM} packets of signal bytes for processing the signal bytes in such MPEG2_{QAM} packets to recover the television images represented by such signal bytes (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48).

32. Regarding claim **30**, Williams teaches the apartments in the apartment building having television receivers (See Fig. 1 Col. 5 lines 5-67, Col. 6 lines 1-15), means at the apartment building for providing a side byte in each MPEG2_{QAM} packet of signal bytes in each superpacket, the side bytes in the MPEG2_{QAM} packets having bits cumulatively indicating individual processing to be provided for the received television signals (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45), and means responsive to the cumulative indications of the particular bits in the side bytes in the MPEG2_{QAM} packets for providing the individual processing cumulatively indicated by such bits (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48).

33. Regarding claim **31**, Williams teaches means at the apartment building for using, in each of the MPEG2_{QPSK} packets of signal bytes in each superpacket, signal bytes indicating a forward error correction (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45), and means at the apartment building for substituting, for the signal bytes indicating the forward error correction for each of the MPEG2_{QPSK} packets of signal bytes, signal bytes indicating such forward error correction for each of the MPEG2_{QAM} packets of signal bytes in such superpacket (See Col. 11 lines 9-63).

34. Regarding claim **32**, Williams teaches means at the apartment building for providing corrections in the television receivers in the apartments in the apartment

building in accordance with the forward error corrections indicated by the signal bytes for each of the MPEG2_{QAM} packets in each superpacket (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48).

35. Regarding claim **33**, Williams teaches each of the side bytes in each MPEG2_{QAM} packet of signal bytes including a bit indicating the occurrence or lack of occurrence of an uncorrectable error in such packet (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45), each MPEG2_{QPSK} packet of signal bytes in each superpacket including additional bytes indicating uncorrectable errors (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45), and means for embedding the uncorrectable error indicated in each MPEG2_{QPSK} packet of signal bytes in each superpacket with signal bytes in each MPEG2_{QAM} packet (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45).

36. Regarding claim **34**, Williams teaches in a method of providing for the introduction of satellite television from satellite transponders into apartments in an apartment building having a cable plant to distribute terrestrial television from a head end system (See Fig. 1 Col. 5 lines 5-67, Col. 6 lines 1-15), receiving at the apartment building packets of MPEG2_{QPSK} signal bytes where each packet includes a first particular number of MPEG2_{QPSK} signal bytes and includes a first sync byte defining the beginning of such packet and where a second particular number of the packets defines a superpacket and where the MPEG2_{QPSK} signal bytes provide the satellite television (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45), providing a second sync byte at the beginning of each packet of MPEG2_{QAM} signal bytes in each superpacket where the QAM signal bytes provide the terrestrial television and where each packet of the

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MPEG2_{QAM} signal bytes includes a third particular number of signal bytes and where the third particular number is different from the first particular number (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45), and using the second sync bytes in the MPEG2_{QAM} packets in each superpacket to provide a processing of the MPEG2_{QAM} packets of signal bytes in each superpacket (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45).

37. Regarding claim **35**, Williams teaches the steps of: providing at a particular position in each MPEG2_{QPSK} packet of signal bytes in each superpacket a side byte providing information controlling the detection and processing of the signal bytes in such MPEG2_{QAM} packet in such superpacket (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45), and processing each MPEG2_{QAM} packet of signal bytes in each superpacket in accordance with the information controlling in the side bytes the processing of the signal bytes in such MPEG2_{QAM} packet (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48).

38. Regarding claim **36**, Williams teaches the steps of: providing, at a particular position in each of the MPEG2_{QPSK} packets of signal bytes in each superpacket, a side byte providing indications of the existence or lack of existence of uncorrectable errors in such MPEG2_{QPSK} packet (See Fig. 5 Col. 11 lines 9-63), processing the MPEG2_{QPSK} packets of signal bytes in each superpacket in accordance with the indication in the side bytes of such MPEG2_{QPSK} packets of the existence or lack of existence of the uncorrectable errors in such MPEG2_{QPSK} packets and in accordance with the additional signal bytes indicating the uncorrectable errors in such MPEG2_{QPSK} packets (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45).

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39. Regarding claim **37**, Williams teaches providing, at a particular position in each MPEG2_{QPSK} packet of signal bytes in each superpacket, a side byte providing at a particular bit in such side byte information cumulatively controlling, with the information at the particular bit in other MPEG2_{QPSK} packets in such superpacket, the processing of the signal bytes in the MPEG2_{QAM} Packets in such superpacket (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45), and processing the MPEG2_{QAM} packets of signal bytes in each superpacket in accordance with the information cumulatively controlling, in the side bytes in such packets in such superpacket, the processing of the signal bytes in the MPEG2_{QAM} packets in such superpacket (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45).

40. Regarding **38**, Williams teaches providing, at a particular position in each of the MPEG2_{QPSK} packets of signal bytes in each superpacket, a side byte providing indications of the existence or lack of existence of uncorrectable errors in such MPEG2_{QPSK} packets (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45), providing, in each MPEG2_{QPSK} packet of signal bytes in each superpacket, additional signal bytes indicating the uncorrectable errors in such MPEG2_{QPSK} packets (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45), and processing the MPEG2_{QPSK} packets of signal bytes in each superpacket in accordance with the indication in the side bytes of the existence or lack of existence of the uncorrectable errors in such MPEG2_{QPSK} packets and in accordance with the additional signal bytes indicating the uncorrectable errors in such MPEG2_{QPSK} packets (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45), providing at a particular binary bit in each side byte information cumulatively controlling, with the

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information at the particular binary bit in other side bytes in such superpacket, the processing of the signal bytes in such packets in such superpacket (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45), and processing the MPEG2_{QAM} packets of signal bytes in each superpacket in accordance with the information cumulatively controlling, in the side bytes in the MPEG2_{QPSK} packets in such superpacket, the processing of the signal bytes in the MPEG2_{QAM} packets in such superpacket (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45, Col. 14 lines 47-58).

41. Regarding claim **39**, Williams teaches In a method of providing for the introduction of satellite television from satellite transponders into apartments in an apartment building having a cable plant wired to distribute terrestrial television from a head end system (See Fig. 1 Col. 5 lines 5-67, Col. 6 lines 1-15), the steps of: providing at the apartment building signal bytes in MPEG2_{QPSK} packets each defined by a first particular number of signal bytes (See Col. 11 lines 9-67, Col. 12 lines 1-45), providing a plurality of the MPEG2_{QPSK} packets of signal bytes in a superpacket, reframing the signal bytes in the superpacket into MPEG2_{QAM} packets of signal bytes where each MPEG2_{QAM} packet is defined by a second particular number of signal bytes different from the first particular number of signal bytes (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45), and processing the MPEG2_{QAM} signal bytes in the packets in the superpacket to form television images (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48).

42. Regarding claim **40**, Williams teaches the steps of: the signal bytes in the MPEG2_{QAM} packets in the superpacket being compressed (See Col. 11 lines 41-63

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MPEG packets are compressed), deframing the reframed MPEG2_{QPSK} packets of signal bytes (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48), and decompressing the deframed MPEG2_{QPSK} packets of signal bytes in the superpacket (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48).

43. Regarding claim **41**, Williams teaches the steps of: modulating the signal bytes in the MPEG2_{QAM} packets in each superpacket (See Col. 11 lines 9-67, Col. 12 lines 1-67, Col. 13 lines 1-38), distributing the modulated signal bytes using QAM through the cable plant (See Col. 11 lines 9-67, Col. 12 lines 1-67, Col. 13 lines 1-38), and demodulating the modulated QAM signal after passage of such modulated signal bytes through the cable plant (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48).

44. Regarding claim **42**, Williams teaches the steps of: detecting sync bytes at the beginning of each of the MPEG2_{QPSK} packets of signal bytes in each superpacket (See Col. 11 lines 9-67, Col. 12 lines 1-67, Col. 13 lines 1-38), forming sync bytes at the beginning of each of the MPEG2_{QAM} packets of signal bytes in each superpacket (See Fig. 5, Col. 11 lines 9-67, Col. 12 lines 1-67, Col. 13 lines 1-38), and reframing the signal bytes in the MPEG2_{QAM} packets of signal bytes in each superpacket in accordance with the sync bytes at the beginning of each of the MPEG2_{QAM} packets of signal bytes in each superpacket (See Col. 11 lines 9-67, Col. 12 lines 1-67, Col. 13 lines 1-38).

45. Regarding claim **43**, William teaches in a method of providing a television image on the face of a monitor in a television receiver, the steps of: receiving a plurality of packets each including a plurality of signal bytes representing images to be displayed

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on the face of the television receiver (See Fig. 1 Col. 5 lines 5-67, Col. 6 lines 1-15), providing in each of the received packets a sync byte indicating a first one of the packets in the plurality (See Col. 11 lines 9-67, Col. 12 lines 1-67, Col. 13 lines 1-38), providing a side byte at each of the packets in the plurality, each of the side bytes being formed from a plurality of bits (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-67, Col. 13 lines 1-38), providing, at a particular position in each of the side bytes, a bit cumulatively indicating with corresponding bits in a sequence of the side bytes in successive instances of the packets, an individual selection of a plurality of television channels in the television receiver to receive the signal bytes (See Fig. 5 Col. 11 lines 9-67, Col. 12 lines 1-45), and processing the signal bytes in the packets to provide the television image in the individual selection of the channels in the monitor in the television receiver (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48).

46. Regarding claim **44**, Williams teaches the steps of: each of the received packets constituting first packets and being defined by a first number of signal bytes (See Col. 11 lines 9-67, Col. 12 lines 1-45), reframing the first packets to form second packets each defined by a second number of signal bytes (See Col. 11 lines 9-67, Col. 12 lines 1-45), distributing the second packets through a cable plant (See Col. 11 lines 9-67, Col. 12 lines 1-67, Col. 13 lines 1-38), and deframing the second packets, after the passage of the second packets through the cable plant, to for the first packets for the processing of the first packets to provide the television image in the individual selection of the channels in the monitor in the television receiver (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48).

47. Regarding claim **45**, Williams teaches the step of: the sequence of the signal bytes constituting a first sequence providing, at the particular position in the side bytes, bits cumulatively indicating, for a second sequence of the side bytes, the health and status of the head end system (See Col. 11 lines 9-67, Col. 12 lines 1-67, Col. 13 lines 1-38), processing the bits in the side bytes in the second sequence to indicate the health and status of the head end system (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48).

48. Regarding claim **46**, Williams teaches the step of: the particular position in each of the side bytes constituting a first particular position (See Col. 11 lines 9-67, Col. 12 lines 1-67, Col. 13 lines 1-38), providing, at a second particular position in each of the side bytes, an indication of whether any error in the packet following such side byte is an uncorrectable error (See Col. 11 lines 9-67, Col. 12 lines 1-67, Col. 13 lines 1-38), providing for each of the packets a plurality of bytes used for forward error correction (See Col. 11 lines 9-67, Col. 12 lines 1-67, Col. 13 lines 1-38), and processing the bytes indicating the forward error correction for each packet in accordance with the value of the bits at the second particular position in the side bytes for each packet (See Col. 13 lines 63-67, Col. 14 lines 1-67, Col. 15 lines 1-48).

Conclusion

49. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schaffner et al. (US 6,104,908) discloses a system that transmodulates television signals in one format to another format.


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50. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamieson W. Fish whose telephone number is 571-272-7307. The examiner can normally be reached on Monday-Friday, 8:00-5:30.

51. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

52. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JF 5/9/2005


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